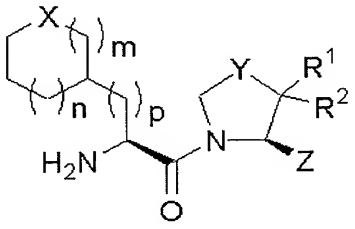
AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions, and listings, of claims in the application.

1. (Currently Amended) An α-amino acid derivative of the formula (I)



(I)

wherein

R^1 is a hydrogen atom, a halogen atom, alkyl or alkoxy,

R^2 is a hydrogen atom, a halogen atom, a hydroxyl group, alkyl or alkoxy, or

R^1 and R^2 are joined to form oxo, hydroxyimino, alkoxyimino or alkylidene,

X is CH-R^3 ~~or N-R^4~~,

Y is ~~CR^5R^6~~

~~wherein R^5 and R^6 are each a hydrogen atom, a halogen atom, a hydroxyl group, alkyl or alkoxy, or R^5 and R^6 are optionally joined to form oxo, hydroxyimino, alkoxyimino or alkylidene,~~

S, ~~S=O or SO_2,~~

Z is a hydrogen atom or cyano,

m and n are each 0, 1 or 2, wherein the sum of m and n is ~~1,~~ 2 ~~or 3~~,

p is ~~0,~~ 0 or 1, ~~2 or 3,~~

R^3 is -NR^7R^8

wherein R^7 and R^8 are optionally the same or different and each independently is a hydrogen atom, alkyl, cycloalkyl, cycloalkylalkyl, aryl, arylalkyl, heteroaryl or heteroarylalkyl, or are optionally bonded to each other to form heterocycle having at least one nitrogen atom, and optionally having other further hetero atom(s),

wherein the heterocycle is optionally substituted or condensed with an aromatic ring optionally having substituent(s),

$-NR^9COR^{10}$

wherein R^9 and R^{10} are optionally the same or different and each independently is a hydrogen atom, alkyl, cycloalkyl, cycloalkylalkyl, aryl, arylalkyl, arylalkenyl, heteroaryl, heteroarylalkyl or heterocycle,

$-NR^{11}CONR^{12}R^{13}$

wherein R^{11}, R^{12} and R^{13} are optionally the same or different and each independently is a hydrogen atom, alkyl, cycloalkyl, cycloalkylalkyl, aryl, arylalkyl, heteroaryl or heteroarylalkyl, or R^{12} and R^{13} are optionally bonded to each other to form heterocycle having at least one nitrogen atom, and optionally having other further hetero atom(s),

wherein the heterocycle is optionally substituted or condensed with an aromatic ring optionally having substituent(s),

$-NR^{14}SO_2R^{15}$

wherein R^{14} and R^{15} are optionally the same or different and each independently is a hydrogen atom, alkyl, cycloalkyl, cycloalkylalkyl, aryl, arylalkyl, heteroaryl, heteroarylalkyl or heterocycle,

$-OR^{16}$ or $-OCOR^{17}$

wherein R^{16} and R^{17} are each a hydrogen atom, alkyl, cycloalkyl, cycloalkylalkyl, aryl, arylalkyl, heteroaryl, heteroarylalkyl or heterocycle, and

~~R^4 is a hydrogen atom, alkyl, cycloalkyl, cycloalkylalkyl, aryl, arylalkyl, heteroaryl, heteroarylalkyl, heterocycle, $-COR^{18}$~~

~~wherein R^{18} is a hydrogen atom, alkyl, cycloalkyl, cycloalkylalkyl, aryl, arylalkyl, arylalkenyl, heteroaryl, heteroarylalkyl or heterocycle,~~

~~$-CONR^{19}R^{20}$~~

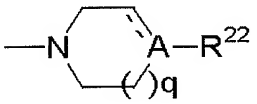
~~wherein R^{19} and R^{20} are optionally the same or different and each independently is a hydrogen atom, alkyl, cycloalkyl, cycloalkylalkyl, aryl, arylalkyl, heteroaryl or heteroarylalkyl, or R^{19} and R^{20} are optionally bonded to each other to form heterocycle having at least one nitrogen atom, and optionally having other further hetero atom(s),~~

~~wherein the heterocycle is optionally substituted or condensed with an aromatic ring optionally having substituent(s), or~~

~~$-SO_2R^{21}$~~

~~wherein R^{21} is alkyl, cycloalkyl, cycloalkylalkyl, aryl, arylalkyl, heteroaryl, heteroarylalkyl or heterocycle,~~

provided that when p is 0, then X is CH-R^3, and R^3 ~~shows the~~ is of formula (II)



(II)

wherein

~~-----~~ is a single bond or a double bond,

R^{22} is aryl or heteroaryl,

Q is 1 or 2, and

A is a carbon atom or a nitrogen atom,

provided that i) when A is a carbon atom, then A is optionally substituted by a hydroxyl group, carboxyl or alkoxycarbonyl, and ii) when A is a nitrogen atom, then

~~-----~~ is a single bond,

wherein, of the above-mentioned groups, alkyl, cycloalkyl, cycloalkylalkyl, aryl, arylalkyl, heteroaryl, heteroarylalkyl and heterocycle optionally have substituent(s),

or a pharmaceutically acceptable salt thereof.

2. (Currently Amended) The α-amino acid derivative of claim 1, wherein m = ~~2,~~ 2 and n = 0 ~~and X = CH-R^3~~.

3. (Previously Presented) The α-amino acid derivative of claim 1, wherein R^3 is the formula (II).

4. (Previously Presented) The α-amino acid derivative of claim 3, wherein R^1 = R^2 = Z = H, q = 1 and A = N.

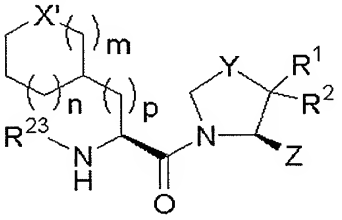
5. (Canceled)

6. (Canceled)

7. (Previously Presented) A pharmaceutical composition comprising an α-amino acid derivative of claim 1 or a pharmaceutically acceptable salt thereof and a pharmacologically acceptable carrier.

8.-11. (Canceled)

12. (Currently Amended) A method of producing a compound of claim 1, which comprises a method of producing a compound of formula (III)



(III)

wherein

X′ is CH-R^3,

R^{23} is -COR^{24}

wherein R^{24} is a hydrogen atom, alkyl, cycloalkyl, cycloalkylalkyl, aryl, arylalkyl, heteroaryl, heteroarylalkyl or heterocycle, or

-$COOR^{25}$

wherein R^{25} is alkyl, cycloalkyl, cycloalkylalkyl, aryl, arylalkyl, heteroaryl, heteroarylalkyl or heterocycle,

R^1 is a hydrogen atom, a halogen atom, alkyl or alkoxy,

R^2 is a hydrogen atom, a halogen atom, a hydroxyl group, alkyl or alkoxy, or

R^1 and R^2 are joined to form oxo, hydroxyimino, alkoxyimino or alkylidene,

Y is ~~CR^5R^6~~

~~wherein R^5 and R^6 are each a hydrogen atom, a halogen atom, a hydroxyl group, alkyl or alkoxy, or R^5 and R^6 are optionally joined to form oxo, hydroxyimino, alkoxyimino or alkylidene,~~

S, ~~S=O or SO_2,~~

Z is a hydrogen atom or cyano,

m and n are each 0, 1 or 2, wherein the sum of m and n is ~~1,~~ 2 ~~or 3~~,

p is ~~0,~~ 0 or 1, ~~2 or 3,~~

R^3 is -NR^7R^8

wherein R^7 and R^8 are optionally the same or different and each independently is a hydrogen atom, alkyl, cycloalkyl, cycloalkylalkyl, aryl, arylalkyl, heteroaryl or heteroarylalkyl, or are optionally bonded to each other to form heterocycle having at least one nitrogen atom, and optionally having other further hetero atom(s),

wherein the heterocycle is optionally substituted or condensed with an aromatic ring optionally having substituent(s),

$-NR^9COR^{10}$

wherein R^9 and R^{10} are optionally the same or different and each independently is a hydrogen atom, alkyl, cycloalkyl, cycloalkylalkyl, aryl, arylalkyl, arylalkenyl, heteroaryl, heteroarylalkyl or heterocycle,

$-NR^{11}CONR^{12}R^{13}$

wherein R^{11}, R^{12} and R^{13} are optionally the same or different and each independently is a hydrogen atom, alkyl, cycloalkyl, cycloalkylalkyl, aryl, arylalkyl, heteroaryl or heteroarylalkyl, or R^{12} and R^{13} are optionally bonded to each other to form heterocycle having at least one nitrogen atom, and optionally having other further hetero atom(s),

wherein the heterocycle is optionally substituted or condensed with an aromatic ring optionally having substituent(s),

$-NR^{14}SO_2R^{15}$

wherein R^{14} and R^{15} are optionally the same or different and each independently is a hydrogen atom, alkyl, cycloalkyl, cycloalkylalkyl, aryl, arylalkyl, heteroaryl, heteroarylalkyl or heterocycle,

$-OR^{16}$ or $-OCOR^{17}$

wherein R^{16} and R^{17} are each a hydrogen atom, alkyl, cycloalkyl, cycloalkylalkyl, aryl, arylalkyl, heteroaryl, heteroarylalkyl or heterocycle, and

~~R^4 is a hydrogen atom, alkyl, cycloalkyl, cycloalkylalkyl, aryl, arylalkyl, heteroaryl, heteroarylalkyl, heterocycle, $-COR^{18}$~~

~~wherein R^{18} is a hydrogen atom, alkyl, cycloalkyl, cycloalkylalkyl, aryl, arylalkyl, arylalkenyl, heteroaryl, heteroarylalkyl or heterocycle,~~

~~$-CONR^{19}R^{20}$~~

~~wherein R^{19} and R^{20} are optionally the same or different and each independently is a hydrogen atom, alkyl, cycloalkyl, cycloalkylalkyl, aryl, arylalkyl, heteroaryl or heteroarylalkyl, or R^{19} and R^{20} are optionally bonded to each other to form heterocycle having at least one nitrogen atom, and optionally having other further hetero atom(s),~~

~~wherein the heterocycle is optionally substituted or condensed with an aromatic ring optionally having substituent(s), or~~

~~$-SO_2R^{21}$~~

~~wherein R^{21} is alkyl, cycloalkyl, cycloalkylalkyl, aryl, arylalkyl, heteroaryl, heteroarylalkyl or heterocycle,~~

wherein, of the above-mentioned groups, alkyl, cycloalkyl, cycloalkylalkyl, aryl, arylalkyl, heteroaryl, heteroarylalkyl and heterocycle optionally have substituent(s)

comprising use of a compound of formula (III) in which X′ is C=O as an intermediate.

13. (Currently Amended) A method of ~~prophylactically or~~ therapeutically treating ~~a GLP-1 related disease~~ type II diabetes or obesity in a subject comprising administering to a subject in need thereof an effective amount of a compound of claim 1 to treat type II diabetes or obesity in the subject.

14.-16. (Canceled)

17. (New) A method of therapeutically treating type II diabetes or obesity in a subject comprising administering to a subject in need thereof an effective amount of a compound of claim 2 to treat type II diabetes or obesity in the subject.

18. (New) A method of therapeutically treating type II diabetes or obesity in a subject comprising administering to a subject in need thereof an effective amount of a compound of claim 3 to treat type II diabetes or obesity in the subject.

19. (New) A method of therapeutically treating type II diabetes or obesity in a subject comprising administering to a subject in need thereof an effective amount of a compound of claim 4 to treat type II diabetes or obesity in the subject.